THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LOUIS A. LICHT

Appeal No. 95-0972
Application No. 07/650,453[1]

ON BRIEF

Before STONER, Chief Administrative Patent Judge, WILLIAM F. SMITH and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 19 and 22 through 29, which are all of the claims pending in this application.

[1] Application for patent filed February 4, 1991.

We AFFIRM-IN-PART, VACATE-IN-PART, and enter a new rejection pursuant to 37 CFR § 1.196(b).

BACKGROUND

The appellant's invention relates to a method of using tree crops as pollutant control. A substantially correct copy of the claims under appeal are reproduced in the appendix to the appellant's brief.[2]

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

1988 Abstract of "Nitrogen Fixing Research Reports"

Organic Gardening, "Taking Hardwood Cuttings," pp. 26-27, November 1989

Successful Farming, "Dollars from Filter Strips," pp. 36-37, February 1992

Claims 1 through 19 and 22 through 29 stand rejected under 35 U.S.C. § 102(b) based upon a public use or sale of the invention.

[2] The examiner noted one error in claim 1 on page 2 of the answer.

Claims 1 through 19 and 22 through 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Successful Farming, "Dollars from Filter Strips," in view of Organic Gardening, "Taking Hardwood Cuttings," and the Abstract of "Nitrogen Fixing Research Reports."

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 21, mailed March 21, 1994), the supplemental examiner's answer (Paper No. 24, mailed June 9, 1994) and the second supplemental examiner's answer (Paper No. 26, mailed August 10, 1994) for the examiner's complete reasoning in support of the rejections, and to the appellant's brief (Paper No. 20, filed January 24, 1994), reply brief and declarations (Paper Nos. 22 and 23, filed May 20, 1994) and response to supplemental answer (Paper No. 25, filed June 24, 1994) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

Before addressing the examiner's rejections of independent claim 1, it is an essential prerequisite that the claimed subject matter be fully understood. Analysis of whether a claim is patentable under 35 U.S.C. §§ 102 and 103 begins with a determination of the scope of the claim. Claim interpretation must begin with the language of the claim itself. See Smithkline Diagnostics, Inc. v. Helena Laboratories Corp., 859 F.2d 878, 882, 8 USPQ2d 1468, 1472 (Fed. Cir. 1988). Accordingly, we will initially direct our attention to claim 1 to derive an understanding of the scope and content thereof.

Before turning to the proper construction of claim 1, it is important to review some basic principles of claim

construction. First, and most important, the language of the claim defines the scope of the protected invention. Yale Lock Mfg. Co. v. Greenleaf, 117 U.S. 554, 559 (1886) ("The scope of letters patent must be limited to the invention covered by the claim, and while the claim may be illustrated it cannot be enlarged by language used in other parts of the specification."); Autogiro Co. of Am. v. United States, 384 F.2d 391, 396, 155 USPQ 697, 701 (Ct. Cl. 1967) ("Courts can neither broaden nor narrow the claims to give the patentee something different than what he has set forth [in the claim]."). See also Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405, 419 (1908); Cimiotti Unhairing Co. v. American Fur Ref. Co., 198 U.S. 399, 410 (1905). Accordingly, "resort must be had in the first instance to the words of the claim" and words "will be given their ordinary and accustomed meaning, unless it appears that the inventor used them differently." Envirotech Corp. v. Al George, Inc., 730 F.2d 753, 759, 221 USPQ 473, 477 (Fed. Cir. 1984). Second, it is equally "fundamental that claims are to be construed in the light of the specification and both are to be

read with a view to ascertaining the invention." United States v. Adams, 383 U.S. 39, 49, 148 USPQ 479, 482 (1966).

Furthermore, the general claim construction principle that limitations found only in the specification of a patent or patent application should not be imported or read into a claim must be followed. See In re Priest, 582 F.2d 33, 37, 199 USPQ 11, 15 (CCPA 1978). One must be careful not to confuse impermissible imputing of limitations from the specification into a claim with the proper reference to the specification to determine the meaning of a particular word or phrase recited in a claim. See E.I. Du Pont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1433, 7 USPQ2d 1129, 1131 (Fed. Cir.), cert. denied, 488 U.S. 986 (1988).

Claim 1 recites:

> A method of removing pollutants from near-surface ground water comprising:
> planting perennial tree stems having an upper and lower end, and having preformed root initials, at a depth so that at least two buds at the upper end of the stem are above the ground and the lower end of the stem is located to provide nutrient, pollutant and water uptake

> interaction with the near-surface ground water supply and nutrients and pollutants contained therein.

Thus, we must understand the meaning of the phrase "the lower end of the stem is located to provide . . . water uptake interaction with the near-surface ground water supply" if we are to understand the scope of claim 1.

In reviewing the specification to ascertain the meaning of the above-noted phrase we find that the appellant has disclosed the following: (1) the trees are planted deep into the soil where the near-surface ground water is located, preferably planted so that the buried end of the stem cutting is greater than 18 inches below the soil surface, and that depths of 5 feet deep and greater have been used to place roots in the near-surface ground water (specification, p. 6); (2) the root is purposely placed to the desired soil depth near the ground water table (specification, p. 7); (3) the cutting must be planted at least adjacent the ground water, and it is preferred that it be planted so that it is actually

in the water table, or even below it (specification, p. 9); and (4) it is possible to plant the cutting more shallowly so that it does not actually intersect the water table when first planted (specification, p. 9).

From our review of the appellant's specification, we find ourselves unable to define the phrase "the lower end of the stem is located to provide . . . water uptake interaction with the near-surface ground water supply" with a reasonable degree of precision and particularity such that the metes and bounds of claim 1 would be understood. In that regard, we are unable to determine if this limitation requires (1) the lower end of the stem as originally planted must be located to interact with the ground water supply near the surface to provide water uptake to the tree stem, (2) the lower end of the stem as originally planted must be located where the ground water supply near the surface is normally located[3] to

[3] At a planting location, the depth of the actual ground water supply at that location may widely vary due to rainfall (see page 21 of the specification) but the normal ground water

provide water uptake to the tree stem, or (3) the lower end of the stem as originally planted must be located so that in the future it will interact with the ground water supply near the surface to provide water uptake to the tree stem.

In addition, we are unable to determine the meaning of "ground water supply." It is not clear to us if the appellant is using the phrase as synonymous with "groundwater table[4]" or to include both the groundwater table and water in the ground (e.g., rainfall which has been absorbed by the ground prior to it entering the groundwater table).

Lastly, we are unable to determine the meaning of "near-surface." That is, how close to the surface does the ground water supply need to be to be considered near surface. Thus, the term "near-surface" is a term of degree. When a word of degree is used, such as the term "near-surface" in claim 1, it

---

depth at that location will be fairly constant.

[4] The appellant has used both phrases throughout the specification.

is necessary to determine whether the specification provides some standard for measuring that degree. See Seattle Box Company, Inc. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984). We have reviewed the appellant's disclosure to help us determine the meaning of the above-noted terminology from claim 1. However, the disclosure does not provide explicit guidelines defining the terminology "near-surface" (claim 1). Furthermore, it is our view that there are no guidelines that would be implicit to one skilled in the art defining the term "near-surface" that would enable one skilled in the art to ascertain what is meant by thereby. For example, one cannot ascertain if ten feet below ground is "near-surface." Absent such guidelines, we are of the opinion that a skilled person would not be able to determine the metes and bounds of the claimed invention with the precision required by the second paragraph of 35 U.S.C. § 112. See In re Hammack, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970).

For the reasons set forth above, the appellant has failed to particularly point out and distinctly claim the invention as required by the second paragraph of 35 U.S.C. § 112.

NEW GROUND OF REJECTION

Under the provisions of 37 CFR § 1.196(b), we enter the following new ground of rejection.

Claims 1 through 19, 23 and 25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention, for the reasons explained above.

As set forth previously, our review of the specification leads us to conclude that one of ordinary skill in the art would not be able to understand the metes and bounds of the phrase "the lower end of the stem is located to provide . . . water uptake interaction with the near-surface ground water supply" in independent claim 1.

THE OBVIOUSNESS REJECTION

Claims 1 through 19, 23 and 25

Considering now the rejections of claims 1 through 19, 23 and 25 under 35 U.S.C. § 103, we have carefully considered the subject matter defined by these claims. However, for reasons stated supra in our new rejection under the second paragraph of Section 112 entered under the provisions of 37 CFR 1.196(b), no reasonably definite meaning can be ascribed to certain language appearing in the claims. As the court in In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970) stated:

> All words in a claim must be considered in judging the patentability of that claim against the prior art. If no reasonably definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious --the claim becomes indefinite.

In comparing the claimed subject matter with the applied prior art, it is apparent to us that considerable speculations and assumptions are necessary in order to determine what in fact is being claimed. Since a rejection based on prior art cannot be based on speculations and assumptions, see In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962), we are constrained to reverse, pro forma, the examiner's

rejections of claims 1 through 19, 23 and 25 under 35 U.S.C. § 103. We hasten to add that this is a procedural reversal rather than one based upon the merits of the section 103 rejection.

Claims 22 and 24

We sustain the rejection of claims 22 and 24 under 35 U.S.C. § 103.

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Successful Farming, "Dollars from Filter Strips," was relied upon by the examiner for teaching that in 1988 it was known to plant filter strips of trees along a river bed to remove pollutants as shown in Figure 5A of the application (answer, p. 7).

The appellant's argue (brief, pp. 3-6) that Successful Farming, "Dollars from Filter Strips," is not available as prior art since it was published after the appellant's filing date. The appellant states (brief, p. 5) that Figure 5 of the application discloses the traditional type of "filter strip" used in the prior art where perennials (i.e., trees) are planted that do not have complex or deep root systems.

In view of this admission by the appellant, we have determined that it is appropriate to rely on Successful Farming, "Dollars from Filter Strips," as teaching that it was known prior to the appellant's invention to plant filter strips of trees along a river bed to remove pollutants as shown in the prior art portion of Figure 5 of the application.

Organic Gardening, "Taking Hardwood Cuttings," discloses a method of planting hardwood cuttings. The method includes planting tree stems (7 to 12 inches long) selected from Salicaceae family (e.g., poplar or willow) and having upper and lower ends and preformed root initials, at a depth so that at least two buds at the upper end of the stem are above ground and the lower end is located under ground to provide nutrient and water uptake.

Based on our analysis and review of Organic Gardening, "Taking Hardwood Cuttings" and claim 22[5], it is our opinion that the only difference is the limitation that the lower end of the stem is located to provide pollutant uptake interaction with water which contains undesirable contaminants.

[5] After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

In applying the above-noted test for obviousness, we reach the conclusion that it would have been obvious to one of ordinary skill in the art at the time the invention was made to plant poplar or willow tree stem cuttings as taught by Organic Gardening, "Taking Hardwood Cuttings" in an area along a river bed so that the trees act as filter strips to remove pollutants as suggested by the prior art shown in Figure 5 of the application.[6]

In addition to the above-noted argument regarding the application of Successful Farming, "Dollars from Filter Strips," as prior art, the appellant argues (brief, p. 9) that the limitation of claim 22 of "planting tree stems from the Salicaceae family located to provide nutrient and contaminant uptake interaction" is not suggested by the applied prior art. We do not agree. As set forth above, Organic Gardening,

[6] Thus, we regard the examiner's application of the teachings of the Abstract of "Nitrogen Fixing Research Reports" to be mere surplusage. The examiner relied on Abstract of "Nitrogen Fixing Research Reports" for teaching planting stems 1.5-2.0 meters long (answer, p. 8). However, this feature is not recited in claims 22 and 24.

"Taking Hardwood Cuttings" teaches planting tree stems from the Salicaceae family (e.g., poplar and willow) located to provide nutrient uptake interaction with water. In addition, the prior art "filter strips" teaches planting trees in an area along a river bed so that the trees provide nutrient and contaminant uptake interaction with water. It is our determination that the combined teachings of the applied prior art would have suggested planting tree stems from the Salicaceae family located to provide nutrient and contaminant uptake interaction with water.

For the reasons set forth above, the decision of the examiner to reject claim 22 under 35 U.S.C. § 103 is affirmed.

The appellant has grouped claims 22 and 24 as standing or falling together.[7] Thereby, in accordance with 37 CFR § 1.192(c)(7), claim 24 falls with claim 22. Thus, it follows that the decision of the examiner to rejection claim 24 under 35 U.S.C. § 103 is also affirmed.

Claims 26 through 29

We will not sustain the rejection of claims 26 through 29 under 35 U.S.C. § 103.

Claim 26 recites:

> A method of reducing leachate from contaminated soils or landfills, said method comprising:
> planting perennial tree stems having an upper and lower end and preformed root initials at a depth such that at least two buds at the upper end of the stem are above the ground and at least two feet of the lower end is buried; and
> allowing the stems to develop roots to remove water from the soil, thereby preventing further leakage of water into the contaminated material and reducing leachate creation.

[7] See page 3 of the appellant's brief.

In addition to the above-noted argument regarding the application of Successful Farming, "Dollars from Filter Strips," as prior art, the appellant argues (brief, pp. 6 and 9) that the planting depth limitation of claim 26 (i.e., the lower ends of the tree stems are buried at a depth of at least two feet) is not suggested by the applied prior art. We agree. In that regard, we note that none of the applied prior art teaches planting the lower end of a tree stem at least two feet beneath the surface. Successful Farming, "Dollars from Filter Strips," does not teach any planting depth. Organic Gardening, "Taking Hardwood Cuttings," teaches a planting depth less than 12 inches. Abstract of "Nitrogen Fixing Research Reports" teaches a maximum planting depth of 30 cm (i.e., less than 12 inches). It appears, therefore, that the examiner's conclusion that the claimed method of claim 26 would have been obvious was based upon hindsight gleaned from the appellant's disclosure, rather than from the teachings of the applied prior art.

For the reasons set forth above, the decision of the examiner to rejection claim 26, and claims 27 through 29 dependent thereon, under 35 U.S.C. § 103 is reversed.

THE PUBLIC USE OR SALE REJECTION

We vacate the rejection of claims 1 through 19 and 22 through 29 under 35 U.S.C. § 102(b) based upon a public use or sale of the invention.

After giving careful consideration to the respective positions articulated by the appellant and the examiner on this issue, it is unclear to us exactly what facts the examiner is relying upon in making this rejection. In fact, it is unclear to us exactly what "use" the examiner believes to have been a "public use" under 35 U.S.C. § 102(b) barring the claimed subject matter.

The examiner appears to be continuing to rely upon Successful Farming, "Dollars from Filter Strips," and the meeting between Dr. Richard C. Schultz and the inventor in November 1988 as somehow establishing a "public use" bar. However, any use described in Successful Farming, "Dollars from Filter Strips," is not a bar to the claimed subject matter since the Risdal farm use described thereon occurred after the appellant's filing date as established by the reply

brief and declarations (Paper Nos. 22 and 23) filed on May 20, 1994. In addition, the meeting between Dr. Richard C. Schultz and the inventor in November 1988 cannot by itself establish a "public use" bar. Mere knowledge of the invention by the public does not warrant rejection under 35 U.S.C. § 102(b) since 35 U.S.C. § 102(b) bars public use or sale, not public knowledge. T.P. Lab. v. Professional Positions, Inc., 724 F.2d 965, 970-71, 220 USPQ 577, 581 (Fed. Cir. 1984).

The examiner may have been relying on the use at Amana Colonies described in the specification (pp. 16-26) and the meeting between Dr. Richard C. Schultz and the inventor in November 1988 as establishing the use at Amana Colonies as being "public." However, if this was the rejection that was intended by the examiner, it is not the rejection of record.

We note that as an aid to resolving a public use issue, the examiner may require an applicant to answer specific questions posed by the examiner and to explain or supplement any evidence of record. 35 U.S.C. § 132, 37 CFR § 1.104(b),

and Manual of Patent Examining Procedure (MPEP) § 706.02(c). Accordingly, in any further prosecution, the examiner should consider whether to require the appellant to answer specific questions posed by the examiner and to explain or supplement any evidence of record.[8]

CONCLUSION

To summarize, the decision of the examiner to reject claims 22 and 24 under 35 U.S.C. § 103 is affirmed; the decision of the examiner to reject claims 1 through 19, 23 and 25 through 29 under 35 U.S.C. § 103 is reversed; the decision of the examiner to reject claims 1 through 19 and 22 through 29 under 35 U.S.C.
§ 102(b) is vacated; and a new rejection of claims 1 through 19, 23 and 25 under 35 U.S.C. § 112, second paragraph, has been added pursuant to provisions of 37 CFR § 1.196(b).

---

[8] MPEP §§ 2133.03(a) and 2133.03(e) discuss "public use" issues.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53131, 53197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

> (b) Appellant may file a single request for rehearing within two months from the date of the original decision . . . .

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

> (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter

> reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
>
> (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART; VACATED-IN-PART; 37 CFR § 1.196(b)

BRUCE H. STONER, JR. Chief Administrative Patent Judge	)
WILLIAM F. SMITH Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY V. NASE Administrative Patent Judge	)

JVN/gjh

ZARLEY, MCKEE, THOMTE,
VOORHESS & SEASE
801 GRAND, SUITE 3200
DES MOINES, IA 50309-2721

APPEAL NO. 95-0972 - JUDGE NASE
APPLICATION NO. 07/650,453

APJ NASE

APJ WILLIAM F. SMITH

CAPJ STONER

DECISION: **AFFIRMED-IN-PART;**
VACATED-IN-PART;
37 CFR § 1.196(b)

Prepared By: Gloria Henderson

DRAFT TYPED: 19 Jan 99

FINAL TYPED: